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L3: Entry 1 of 2

File: DWPI

Jan 15, 1999

DERWENT-ACC-NO: 1998-585480

DERWENT-WEEK: 200037

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TITLE: Specifically designed silicone copolymer - useful in hair care compositions and provided improved styling and hair conditioning properties

INVENTOR: BOLICH, R E; TORGERSON, P M

PATENT-ASSIGNEE:

ASSIGNEE

CODE

PROCTER & GAMBLE CO

PROC

BOLICH R E

BOLII

PRIORITY-DATA: 1990US-0505755 (April 6, 1990), 1989US-0390568
(August 7, 1989)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
KR 164210 B1	January 15, 1999	N/A	000	A61K007/06
EP 878184 A2	November 18, 1998	E	024	A61K007/06
EP 412704 B1	April 28, 1999	E	000	A61K007/06
JP 2944718 B2	September 6, 1999	N/A	019	A61K007/06

DESIGNATED-STATES: AT BE CH DE DK ES FR GB GR IT LI LU NL SE AT
BE CH DE DK ES FR GB GR IT LI LU NL SE

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
KR 164210B1	August 7, 1990	1990KR-0012165	N/A
EP 878184A2	July 31, 1990	1990EP-0308388	Div ex
EP 878184A2	July 31, 1990	1998EP-0108316	N/A
EP 878184A2		EP 412704	Div ex
EP 412704B1	July 31, 1990	1990EP-0308388	N/A
EP 412704B1	July 31, 1990	1998EP-0108316	Related to
EP 412704B1		EP 878184	Related to
JP 2944718B2	August 7, 1990	1990JP-0210120	N/A
JP 2944718B2		JP 3128311	Previous Publ.

INT-CL (IPC): A61K 7/06; A61K 7/075; A61K 7/08; A61K 7/11; C08L
43/04; C08L 83/10

RELATED-ACC-NO: 1991-045836

ABSTRACTED-PUB-NO: EP 412704B

BASIC-ABSTRACT:

A copolymer having a mol wt of 10,000-1,000,000 has a vinyl polymeric backbone having grafted to it monovalent siloxane polymeric moieties. The copolymer comprises 0.01-50% C monomers, 5-98% A monomers and 0-98% B monomers. A is selected from t-butyl acrylate, and/or t-butyl methacrylate; B = reinforcing monomer(s) copolymerizable with A and selected from polar monomers and macromers, especially acrylic acid, N,N-dimethylacrylamide, dimethylaminoethyl methacrylate, quaternized dimethylaminoethyl methacrylate, and/or vinyl pyrrolidone; C = polymeric monomer having a mol wt of 1,000-50,000 and of formula $X(Y)_nSi(R)_{3-m}(Z)_m$; X = vinyl group copolymerizable with A and B; Y = divalent linking group; R = H, lower alkyl, aryl or alkoxy; Z = monovalent siloxane polymeric moiety of number average mol wt at least 500, essentially unreactive under copolymerization conditions, and pendant from the vinyl polymeric backbone after polymerization; n = 0 or 1; and m = 1-3. Also claimed are: (1) a hair care composition comprising: (a) 0.1-10% of a silicone containing copolymer containing a Si containing portion having a mol wt of 1,000-50,000 and covalently attached to a non-silicone portion; and (b) 0.5-99.5% of a carrier suitable for application to hair. The copolymer and the carrier are selected such that, when dried, the copolymer phase separates into a discontinuous phase including the silicone portion and a continuous phase including the non-silicone portion; and (2) a hair care composition comprising: (A) 0.1-10% of a copolymer having a mol wt of 10,000-1,000,000 as specified above in which component (c) comprises 0.01-50% of the copolymer; and (B) 0.5-99.5% of a carrier suitable for application to hair and comprising a plasticizer.

USE - The silicone containing copolymer is useful in hair conditioning and styling compositions and provide improved styling and conditioning benefits and still leaves the hair with a natural non-stiff and non-sticky feel.

ABSTRACTED-PUB-NO:

EP 878184A

EQUIVALENT-ABSTRACTS:

Novel hair care a (a) 0.1-10% of a copolymer in which a silicone portion of mol. wt. 1,000-50,000 is covalently attached to a non-silicone portion of these copolymers are claimed as novel); and (b) 0.5-99.5% of a carrier, components (a) and (b) being such that, when dried, the copolymer phase separates into a discontinuous phase including the silicone portion and a continuous phase including the non-silicone portion.

USE/ADVANTAGE - The compsns. can be in the form of a shampoo or conditioner as a spray, mousse, tonic or gel. Conditioning and style-retention can be provided from a single compsns. and the

tested hair is without a stiff or sticky/tacky feel.

CHOSEN-DRAWING: Dwg.0/0

TITLE-TERMS: SPECIFIC DESIGN SILICONE COPOLYMER USEFUL HAIR CARE
COMPOSITION IMPROVE STYLE HAIR CONDITION PROPERTIES

DERWENT-CLASS: A14 A26 A96 D21 D25 E19

CPI-CODES: A04-D05A; A04-F04; A04-F06E5; A06-A00E3; A12-V04A;
D08-B04; D08-B05;

ENHANCED-POLYMER-INDEXING:

Polymer Index [1.1] 018 ; R09390 G0351 G0340 G0339 G0260 G0022
D01 D11 D10 D12 D26 D51 D53 D58 D63 D87 F41 F89 ; R11165 G0395
G0384 G0339 G0260 G0022 D01 D11 D10 D12 D26 D51 D53 D58 D63 D88
F41 F89 ; R00446 G0282 G0271 G0260 G0022 D01 D12 D10 D26 D51 D53
D58 D60 D83 F36 F35 ; R21733 G0453 G0260 G0022 D01 D11 D10 D12
D26 D51 D53 D58 D85 F70 F93 ; R01606 G0384 G0339 G0260 G0022 D01
D11 D10 D12 D26 D51 D53 D58 D63 D88 F08 F07 F41 F89 ; G0419 G0384
G0339 G0260 G0022 D01 D12 D10 D26 D51 D53 D58 D63 F41 F89 D11
D61*R D88 F16 ; G0635 G0022 D01 D12 D10 D23 D22 D31 D41 D51 D53
D58 D75 D86 F71 ; G0022*R D01 D51 D53 D11 D10 D12 D18*R D58 F81
F83 F86 F87 D95 H0204 ; H0033 H0011 ; P0088 Polymer Index [1.2]
018 ; ND01 ; ND04 ; Q9999 Q9187 Q9165 ; B9999 B5094 B4977 B4740
Polymer Index [2.1] 018 ; H0191 ; P1445*R F81 Si 4A ; P1456 P1445
F81 F86 D01 D11 D50 D82 Si 4A ; M9999 M2153*R ; M9999 M2813

SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C1998-175289